

“That’s one small step for a man, one giant leap for mankind.”

About *Luna!*

Questions touching space development and lunar settlement are regularly raised in such periodicals as *Ad Astra* (published by the National Space Society) and *Moon Miners’ Manifesto* (Moon Society and affiliates). What, then, justifies the introduction of this new publication?

Luna! must be distinct in purpose as well as in content, or be superfluous. The journals alluded to are addressed to confirmed space enthusiasts pursuing their established interests. They are, thus, limited in their polemic effect both by their restricted circulation and by the content of their writing, which assumes certain attitudes and knowledge peculiar to that audience. For our message to reach, not even the general public, but those people

Moon Phases

New	27 December 12:23 GMT
First Quarter	4 January 11:56 GMT
Full	11 January 03:27 GMT
Last Quarter	18 January 02:47 GMT
New	26 January 07:56 GMT
First Quarter	2 February 23:12 GMT

Memorials

27 January

Apollo 1 (1967)

Roger Chaffee, Virgil
Grissom, Edward White

28 January

Challenger STS 51-L (1986)

Gregory Jarvis, Ellison
Onizuka, Judith Resnik,
Francis Scobee, Michael
Smith, Christa McAuliffe,
Ronald McNair

1 February

Columbia STS-107 (2003)

Michael Anderson, David
Brown, Kalpana Chawla,
Laurel Clark, Rick
Husband, Willie McCool,
Ilan Ramon

Make 2009 Your Lunar Year

The number of exploratory missions planned and undertaken in recent years by national space agencies, some of them new to the field, and the appearance of private-sector initiatives such as the *Google Lunar X-Prize*, evidence a strong interest in Luna at the present day. In response, the Planetary Society and the Carnegie Foundation have proposed that the period opening with the Japanese **Kaguya** lunar orbiter (launched in September 2007) and closing with the first manned lunar exploratory mission since **Apollo 17** (to occur in 2018 according to one version of the U.S. *Vision for Space Exploration*) be designated an *International Lunar Decade*. This ‘decade’, based on the (18-month) *International Geophysical Year* of 1956-8 which saw the first Earth satellite launches, is meant to provide a framework for international scientific cooperation and coordination in the

Priorities

Americans are not alone in being threatened with ruin. Around the world, the cry has gone out that disaster must come if immense sums are not immediately poured out for bank relief and ‘economic stimulus packages’. The situation raises many questions, not all of which we are prepared to consider here. For our purposes, however, the vital point is that the panicked nations are perfectly willing to put up trillions of dollars — money which does not even exist, and must be called into being by decree — over a few months, to secure nothing more than a temporary respite from the collapse of an unsound system. They are not, however, willing to invest a few hundred billions over a decade or so in a full-scale program of space development, essentially the only prospect of permanent prosperity for all nations.

The Luna Project stands in answer to this paradox. Establishing a largely self-supporting base and then ‘building downwards’ reduces the initial cost of space development, but increases the required time. In a case of “better late than never”, the lower cost allows forward-thinking people to take matters into their own hands and do what government and big business have not.

study of Terra’s nearest neighbor.

That this proposal should come from the Planetary Society is unexpected, given that body’s emphasis on unmanned science missions to more distant parts of the Solar System, particularly Mars and the moons of Jupiter ; and following the bank panic we may question how many of the planned missions will be realized — space programs, while small by major government standards, make easy targets for budget-cutters hunting ‘waste’. The basic concept, though, should not be disregarded. All of us are more likely to do something if we set aside time for it. Let this fortieth year since humans first visited the lunar surface be the year you take action to make lunar settlement a reality.

Luna City or Bust!

PART 1

We have called for immediate, permanent human settlement in Luna, and further called upon everyone interested in space development to support this goal as the best first step toward the realization of their ultimate aims. This message requires some justification, which we intend to provide under this title in the coming weeks.

Of the many questions which could be raised, one of the simplest is “why Luna?” On what grounds have we chosen the Moon as the first permanent outpost of humanity beyond Earth? Many answers are possible — that it is better-mapped and more fully explored than any other celestial body, that its small gravity and negligible atmosphere make it easy to launch from, that it is the only other globe upon which men have yet set foot — but the best answer is “because it is there”.

Let us emphasize : because it is there. Luna’s great advantage, especially at this early stage of space activity, is its position, which makes it more readily accessible from Terra than any other body in the Solar System. The claim of the Mars Society, that less total velocity is required to go to Mars from Earth than to the Moon, is calculated based on the Hohmann transfer orbit, and requires braking from interplanetary transfer velocities to landing using only atmospheric drag. The second condition has proven difficult to fulfill,

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Call for Contributions

As with the Luna Project itself, a publication such as this one demands three things, particularly if it is to appear with any frequency : time, creativity, and money. Fortunately, these requisites need not be combined in a single person.

Money is required principally to pay the cost of printing and mailing. While donations to defray these expenses will be gratefully accepted, as electronic publishing methods lend themselves to separating distribution from editorial work, it is also possible to donate the printing and mailing themselves. We invite everyone to take full advantage of the printable on-line version and distribute *Luna!* locally, at whatever venues and events seem appropriate, and by mail to anyone who might benefit by receiving it. Including it in APA distributions and other shared mailings would be of particular service.

Without creativity, of course, there is nothing to fill these columns, and our needs in this respect are described in the sidebar. We will not guarantee publication and cannot ordinarily pay for contributions, but all contributors will be suitably credited, and every effort will be made to inform a contributor when his piece appears, and supply him with a copy of that issue. We will accept rights restrictions which do not affect the unlimited distribution of complete copies of *Luna!* in print and electronic forms.

The editing and compilation of any publication requires time, which is always dear, together with a certain degree of skill. As the nature of the work permits dividing it among individuals, and responsibility for issues of a periodical can be shared in round-robin fashion, we earnestly solicit inquiries from anyone willing to assist in such an editorial capacity.

Events

In most of the eighteen months since the inception of the Luna Project, I have attended one or two events, such as science-fiction conventions, in order to share the concept with people who might be open to it. I would happily continue, and even do more, but for two limits on my activity : money, and the structure of space-time. All the convention memberships, hotel rooms, restaurant meals, and transportation have strained my resources severely. Moreover, the impossibility of being in two places at once restricts the events I can possibly attend.

Therefore, I am asking for two kinds of

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while the first imposes a travel time of eight months and a wait of twenty-six months between departure opportunities. By contrast, the lunar passage requires less than five days, and can be made at will.

The laws of orbital mechanics also give Luna excellent access to Terra and its nearby space. In fact, low terrestrial orbit can be reached from Luna with less than 70% of the velocity required from Terra, even before atmospheric braking is considered, and the situation with respect to the economically important geosynchronous orbit is arguably even better. This will enable the lunar settlement to service and launch satellites, provision space stations and spacecraft, and eventually supply materials to the orbital industries which must develop if humanity is to prosper in the coming decades.

Again, radio communications between Terra and Luna are not subject to the vagaries of interplanetary transmission. The constant round-trip delay of less than three seconds, and the fairly low power and equipment cost of bandwidth, permit real-time voice and even video communication, as well as teleoperation of machinery. By way of contrast, communications with Mars are delayed for four to twenty minutes in each direction, and blacked out entirely for weeks at conjunction, and require either high-powered transmitters or very sophisticated ground stations.

An establishment on the lunar surface, in other words, can be built up more rapidly, supplied more satisfactorily, and in case of emergency succored more surely, than an equivalent anywhere else in the Solar System. Furthermore, it can participate more easily and fully in the economic life of Earth and near-Earth space, where most economic activity is likely to be concentrated for a long time to come.

assistance. First, I need to split hotel charges, both for the Worldcon and the Space Access Conference, which I definitely mean to attend (but have not yet made lodging arrangements for), and for other events such as Lunacon, Conestoga, and the Westercon, which I may otherwise have to skip. I am not, fortunately, very particular as to my sleeping arrangements. Second, the Project needs other people to represent it, even if only by, e.g., keeping a stack of pamphlets on a dealer table. Even at events I do attend, I find periodic relief to be very useful.

—**Christopher Carson**
a.k.a. *publius*

merely who are already receptive but not yet convinced, we must make it accessible to them, by framing it properly and disseminating it widely.

We say it with pride : *Luna!* is intended as much to persuade as to inform. We mean to move the hearts of our readers as much as their minds, in order that they may then move their limbs. To this end, we will publish not only news and letters, opinion and technical pieces, but fiction, poetry, graphic art — whatever suits our purpose, whether original or reprints of any age ; put out a new issue as often as we have material to fill it, rather than wait on a publication date ; and take every opportunity to place it in the hands of the public. The single-sheet format is meant to be convenient to mail, to encourage the casual reader who might hesitate to pick up something larger, and to force more frequent publication by simple limitation of space.

We also mean to beg. Only a more than Satanic pride would not stoop to begging in a matter of this gravity, and it would be the height of folly to urge our readers to action without suggesting forms for that action to take. This begging may at least be less tiresome than most, as we mean to request various kinds of assistance beyond money, including suggestions as to what we should ask for.

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